## REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Applicants again note the allowability of Claim 6 with appreciation, but nonetheless submit that all of the claims define over the cited prior art.

All of the rejected claims are method claims reciting a method for producing reduced iron. According to Claim 1, the furnace gas in the cooling step is allowed to flow in the direction of the movement of the hearth using flow rate-controlling partitions, and oxidizing gas is prevented from flowing from the discharging step to the cooling step using the flow rate-controlling partitions. This may be done, for example, by vertically moving the partition as is described at lines 3-7 of page 23.

Claim 16 further recites that the flow of the furnace gas in the direction of the movement of the hearth is due to the higher pressure of the furnace gas in the cooling step.

Claims 1-5, 7-8 and 15-16 were again rejected under 35 U.S.C. § 103 as being obvious over Kamikawa et al. It is respectfully submitted, however, that the Office Action has not identified a rational factual basis to support the obviousness in Kamikawa et al of the feature of Claims 1 and 16 whereby the furnace gas in the cooling step is allowed to flow in the direction of the movement of the hearth.

There appears to be no dispute that Kamikawa et al does **not** teach a method for producing reduced iron wherein the furnace gas in the cooling step is allowed to flow in the direction of the movement of the hearth. Instead, air entering the furnace via the material supply port in Kamikawa et al is suppressed or prevented by partitions 53b from flowing back to the discharge portion of the furnace. It is this *suppression* of the backflow of air that is described as increasing the operating efficiency of the furnace. See col. 8, lines 24-35. Thus, there is no rational basis to conclude that Kamikawa et al provides a motivation to

increase efficiency by allowing gas to flow, in the cooling step, in the direction of the movement of the hearth.

Despite this, the Office Action has justified maintaining the rejection based on Kamikawa et al by asserting that both the claimed partitions and those of Kamikawa et al are inherently capable of suppressing airflow. That is, the claims do not "specify the specifically [*sic*] arrangement of the controlling portions or showing [*sic*] the differences between the partition plate of the instant invention" and that of Kamikawa et al. Therefore, the partition plate of Kamikawa et al

> has the similar function of [*sic*] the partition plate of the present invention and it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the partition plates ... allowing the flow the furnace gas [*sic*] in the direction of the movement of the hearth.

Accordingly, it appears to be the position of the Office Action that the use of the partitions of Kamikawa et al in a way that is *inconsistent* with its goal of suppressing the backflow of air in the furnace would nonetheless have been obvious to one skilled in the art because the specific arrangement of the partitions that allows air flow in the direction of the movement of the hearth in the cooling step of the invention has not been claimed.

It is respectfully submitted, however, that this apparent requirement to claim the arrangement of the partitions is not justified and that Claims 1 and 16 are not obvious, for at least the following reasons.

First, the rejected claims are method claims, and the Office Action does not allege that the feature whereby the furnace gas is allowed to flow in the direction of the movement of the hearth in the cooling step has not been claimed. The particular arrangement of the partitions for producing this flow pattern is instead a *structural* feature of the partitions. The structure of the partitions, however, is appropriate for the apparatus claims that were deemed to be a

separate invention in the Office Action of January 28, 2008. Therefore, there is no basis for requiring such further structural features in the present method claims.

Second, it is not the particular structure of the partitions that renders these claims unobvious from Kamikawa et al, but that fact that the furnace gas is allowed to flow in the direction of the movement of the hearth in the cooling step. The fact that Kamikawa et al also provides partitions has no bearing on the obviousness of the claimed gas flow if those partitions do not allow the furnace gas to flow in the direction of the movement of the hearth.

Finally, as noted above, it would not have been obvious for the partitions of Kamikawa et al to have been arranged to allowed the furnace gas to flow in the direction of the movement of the hearth since Kamikawa et al teaches that such movement should be suppressed. Moreover, the purported motivation of increasing operating efficiency would not have suggested allowing the furnace gas to flow in the direction of the movement of the hearth because Kamikawa et al teaches that it is the suppression of the flow of air in the furnace that increases operating efficiency. Accordingly, Claims 1 and 16 would not have been obvious to one skilled in the art.

As for the feature of Claim 2 that the pressure of the furnace gas in the melting step is maintained higher than that of the furnace gas in other steps using the flow rate-controlling partitions, the Office Action does not explain why a disclosure of greater operational efficiency due to the disclosed suppressed or blocked air flow in Kamikawa et al would have rendered it obvious to maintain a higher pressure in one of the furnace zones. Instead, Kamikawa et al *teaches away* from maintaining a higher pressure in one of the furnace zones since such a pressure difference will promote the flow of gas past the partition plates, i.e., the desired suppression of the gas flow will be impaired.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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